

CLAIMS

1. An inoculation training kit, comprising:
 - a holding container, having disposed therein:
 - 5 an inoculation needle; and
 - a simulated body part having a substantially realistic sensory feedback associated with practice inoculations applied with the inoculation needle to the simulated body part.
- 10 2. The inoculation training kit of Claim 1, wherein the substantially realistic sensory feedback includes at least one of substantially realistic haptic feedback and substantially realistic visual feedback.
- 15 3. The inoculation training kit of Claim 2, wherein the substantially realistic visual feedback includes simulated bleeding.
4. The inoculation training kit of Claim 2, wherein the substantially realistic visual feedback includes elastic deformation of the simulated body part.
- 20 5. The inoculation training kit of Claim 1, wherein the simulated body part includes a blood container containing simulated blood and the simulated body part is adapted to release a predetermined amount of the simulated blood in response to the practice inoculations applied with the inoculation needle to the simulated body part.
- 25 6. The inoculation training kit of Claim 5, wherein the simulated blood has a viscosity of about fifty to five hundred cps.
7. The inoculation training kit of Claim 5, wherein the blood container comprises a bag and a sponge disposed within the bag, wherein the sponge contains the simulated blood.
- 30 8. The inoculation training kit of Claim 7, wherein a wall of the bag has a thickness of

about one to twenty mils and a durometer of about forty to one hundred twenty Shore A.

9. The inoculation training kit of Claim 1, wherein the simulated body part includes a simulated skin covering.

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10. The inoculation training kit of Claim 7, wherein the simulated skin covering has a thickness of about ten to one hundred mils and a durometer of about twenty to eighty Shore A.

10 11. The inoculation training kit of Claim 1, wherein the simulated body part includes an inner core.

12. The inoculation training kit of Claim 1, wherein the inner core has a durometer of about fifteen to ninety Shore A.

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13. The inoculation training kit of Claim 1, wherein the simulated body part includes:
a simulated skin covering having a thickness of about ten to one hundred mils and a durometer of about twenty to eighty Shore A;

an inner core having a durometer of about fifteen to ninety Shore A; and

20 a blood container containing simulated blood disposed between the simulated skin and the inner core, wherein the simulated body part is adapted to release a predetermined amount of the simulated blood in response to the practice inoculations applied with the inoculation needle to the simulated body part.

25 14. The inoculation training kit of Claim 13, wherein the blood container includes a bag with a wall thickness of about one to twenty mils and with a durometer of about forty to one hundred twenty Shore A and having a sponge disposed within the bag containing the simulated blood having a viscosity of about fifty to five hundred cps.

30 15. The inoculation training kit of Claim 13, wherein at least one of the simulated skin, the blood container, and the inner core is made from polyurethane.

16. The inoculation training kit of Claim 1, wherein the simulated body part comprises a simulated portion of a human arm.

17. The inoculation training kit of Claim 1, wherein the inoculation needle comprises a
5 bifurcated needle.

18. The inoculation training kit of Claim 1, wherein the inoculation needle comprises a hypodermic needle and a syringe adapted to couple to the hypodermic needle.

10 19. The inoculation training kit of Claim 1, wherein the holding container has further disposed therein at least one of a disinfecting agent, a surgical glove, a vial of simulated vaccine, and instructions for administering the simulated vaccine with the inoculation needle.

15 20. The inoculation training kit of Claim 1, wherein the holding container includes an outer cylindrical container and an inner cylindrical container, wherein the inner cylindrical container and the simulated body part are adapted to fit within the outer cylindrical container, wherein the inner cylindrical container contains the inoculation needle.

20 21. The inoculation training kit of Claim 20, wherein at least one of the outer cylindrical container and the inner cylindrical container includes at least one removable cap having at least one compartment to hold a vial of simulated vaccine in an upright position when the removable cap is removed from the inner container and placed on a generally horizontal surface and the vial of simulated vaccine is placed upright in the compartment.

25 22. The inoculation training kit of Claim 1, further including a stand having a retention mechanism adapted to retain the simulated body part to the stand.

23. The inoculation training kit of Claim 22, wherein the stand has a shape
30 corresponding to a shoulder, and the simulated body part has a shape corresponding to a portion of an arm.

24. The inoculation training kit of Claim 23, wherein the stand, when coupled to the simulated body part and disposed upon a top surface of a table, is at height corresponding to a height of a person when sitting in a chair.

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25. The inoculation training kit of Claim 23, wherein retention mechanism includes a magnet.

10 26. The inoculation training kit of Claim 1, wherein the holding container comprises a holding tray having compartments adapted to hold the inoculation needle and the simulated body part.

15 27. The inoculation training kit of Claim 26, further including a removable cover over the holding tray adapted to retain the inoculation needle and the simulated body part in the holding tray during transport.

20 28. The inoculation training kit of Claim 1, wherein the holding container has further disposed therein instructions for administering a vaccine with the inoculation needle comprising a compact disc (CD) having the instructions disposed thereon.

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29. The inoculation training kit of Claim 28, wherein the holding container has a removable cap and the CD is removably coupled to a surface of the removable cap.

30. A simulated body part, comprising:

25 a simulated skin covering; and
a blood container containing simulated blood disposed within the simulated skin covering, wherein the simulated body part provides a substantially realistic sensory feedback associated with practice inoculations applied to the simulated body part.

30 31. The simulated body part of Claim 30, wherein the substantially realistic sensory feedback includes at least one of substantially realistic haptic feedback and substantially realistic visual feedback.

32. The inoculation training kit of Claim 31, wherein the substantially realistic visual feedback includes simulated bleeding.

5 33. The inoculation training kit of Claim 31, wherein the substantially realistic visual feedback includes elastic deformation of the simulated body part.

34. The simulated body part of Claim 30, wherein the simulated skin covering has a thickness of about ten to one hundred mils and a durometer of about twenty to eighty Shore
10 A.

35. The simulated body part of Claim 30, further including a inner core and the blood container is disposed between the simulated skin covering and the inner core, wherein the inner core has a durometer of about fifteen to ninety Shore A.

15 36. The simulated body part of Claim 30, wherein the blood container includes a bag having a wall thickness of about one to twenty mils and a durometer of about forty to one hundred twenty Shore A, and further includes a sponge disposed within the bag and containing the simulated blood having a viscosity of about fifty to five hundred cps, wherein
20 the simulated body part is adapted to release a predetermined amount of the simulated blood in response to the practice inoculations applied to the simulated body part.

37. The simulated body part of Claim 30 further including a inner core and the blood container is disposed between the simulated skin covering and the inner core, wherein the simulated skin covering has a thickness of about ten to one hundred mils and a durometer of about twenty to eighty Shore A, the inner core has a durometer of about fifteen to ninety Shore A, and the blood container includes a bag having a wall thickness of about one to twenty mils and a durometer of about forty to one hundred twenty Shore A, and further includes a sponge disposed with the bag containing the simulated blood having a viscosity
25 of about fifty to five hundred cps, wherein the simulated body part is adapted to release a predetermined amount of the simulated blood upon a practice inoculation applied to the simulated body part.
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38. The simulated body part of Claim 30, wherein the blood container comprises:
a blood reservoir containing simulated blood;
a blood orifice coupled to the simulated skin covering;
5 a blood pump coupled to the blood reservoir and to the blood orifice, including at least one Nitinol portion coupled to the processor and adapted to squeeze the blood reservoir to generate a hydraulic force; and
a processor adapted to detect the practice inoculations applied to the simulated body part and further adapted to activate the blood pump to generate the hydraulic force to move
10 a predetermined amount of the simulated blood from the blood reservoir to the blood orifice in response to a predetermined number of the practice inoculations applied to the simulated body part.

39. The simulated body part of Claim 38, wherein the processor includes a counter
15 adapted to count the predetermined number of practice inoculations, and wherein the processor is adapted to activate the blood pump in response to the counted predetermined number of the practice inoculations.

40. The simulated body part of Claim 39, further including a mechanical switch coupled
20 to the simulated skin and to the processor and adapted to sense the practice inoculations.

41. The simulated body part of Claim 39, further including at least one of a piezoelectric film and a piezoelectric element coupled to the simulated skin and to the processor and adapted to sense the practice inoculations.
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42. The simulated body part of Claim 38, wherein the predetermined number of practice inoculations is selectable.

43. The simulated body part of Claim 29, wherein the substantially realistic sensory
30 feedback is associated with practice inoculations applied with a bifurcated needle.

44. The simulated body part of Claim 29, wherein the substantially realistic sensory feedback is associated with practice inoculations applied with a hypodermic needle.

5 45. An apparatus for holding a vaccine vial, comprising:

at least one compartment adapted to hold the vaccine vial in an upright position while exposing an end of the vaccine vial to be accessible to an inoculation needle; and

10 at least one compartment adapted to hold the vaccine vial at an angle between about thirty and sixty degrees while exposing the end of the vaccine vial to be accessible to the inoculation needle.

46. The holding container of Claim 45, wherein the holding apparatus is made from molded plastic.

15 47. The holding container of Claim 45, wherein the holding container further includes at least one compartment adapted to hold a cap from the vaccine vial.